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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,828	07/14/2003	Akio Nagasaka	ASA-1141	5222

7590 11/14/2005
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EXAMINER

LAROSE, COLIN M

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,828

Applicant(s)

NAGASAKA ET AL.

Examiner

Colin M. LaRose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/14/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/5/05, 7/14/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 9-13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20, 25, 27, 31, 32, 37, 39, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication 2002/0028004 by Miura et al. ("Miura").

Regarding claims 20, 25, 27, 31, 32, 37, 39, and 43, Miura discloses a personal identification apparatus (figure 1) comprising:

two light sources (2) to irradiate light to a finger from two sides of the finger (see figure 5: at least two light sources 2 are disposed around the finger to illuminate at least the left and right sides of the finger);

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an image capture unit (4) to capture the light from the light sources transmitted through the finger (see also figure 5, wherein a plurality of cameras are utilized as an image capture unit); and

a processing unit (1, coupled with CPU 9) to cause the two light sources to irradiate the light alternately, and cause the image capture unit to capture a plurality of images at a timing of the irradiation of the light sources (see paragraph [0033]: “if interference among the light sources disturbs the received images, the light sources may be operated with time lags for consecutive imaging” – in other words, the light are alternately irradiated and the plurality of images are captured during the irradiation of the alternating light sources in order to eliminate interference among the images),

wherein the processing unit extracts a feature of a vein pattern of the finger from the plurality of images captured by the image capture unit and executes personal identification using the extracted feature (i.e. the CPU 9 processes the captured images to extract the vein patterns and identify an individual therefor – see figure 9).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 21, 23, 26, 29, 33, 34, 38, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0028004 by Miura et al. ("Miura") in view of U.S. Patent Application Publication 2002/0048014 by Kono et al. ("Kono").

Regarding claims 21, 26, 33, and 38, Miura does not expressly disclose extracting the feature of the vein pattern from unsaturated regions of the plurality of images.

Kono discloses a system for identifying an individual on the basis of vein patterns that is very similar to that of Miura. In particular, Kono teaches that when irradiating and imaging vein patterns of a finger, it is advantageous to control the amount of light impinging the finger so as to optimize the light intensity and produce image data that is essentially unsaturated and does not exceed a predefined reference intensity. See paragraphs [0031]-[0034].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Miura by Kono to extract the vein pattern from unsaturated regions, as claimed, since Kono teaches that when imaging a finger in order to detect vein patterns, it is desirable to control the amount of light impinging on the finger so as to produce an image that does not exceed a predefined intensity value and is therefore unsaturated. The resulting image's intensity is thus optimized for the purposes of detecting vein patterns. See paragraphs [0031]-[0034].

Regarding claims 23, 29, 34, and 40, Miura does not disclose measuring finger thickness and controlling the amount of light based on the finger thickness, as claimed.

Kono discloses a system for identifying an individual on the basis of vein patterns that is very similar to that of Miura. In particular, Kono teaches that when irradiating and imaging vein patterns of a finger, it is advantageous to control the amount of light impinging the finger so as to

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optimize the light intensity. Kono teaches that the light is advantageously varied according to the thickness of the finger. A plurality of LEDs are employed to detect the thickness of the finger and thereby select which light elements are to be turned on for illuminating the finger. See paragraph [0029].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Miura by Kono to measure the thickness of the finger and control the amount of light based on the thickness, since Kono teaches that such a technique of varying the amount of light based on the size of the finger is conventionally employed for the purposes of optimally imaging a finger in order to detect vein patterns therein. See paragraph [0029].

6. Claims 22, 28, 36, and 42, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0028004 by Miura et al. ("Miura") in view of U.S. Design Patent 382,862 by Nakayama et al. ("Nakayama").

Regarding claims 22, 28, 36, and 42, Miura does not expressly disclose a guide part for receiving the finger and causing it to arc, as claimed.

Nakayama discloses a conventional design for a finger-imaging apparatus. The apparatus includes a guide part that receives a finger to be imaged and causes the finger to arc, as shown in figure 2. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Miura by Nakayama to incorporate Nakayama's guide part since Nakayama teaches that a guide part for receiving a finger to be imaged that causes the finger to arc is a conventional design for a finger imaging apparatus.

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7. Claims 24, 30, 35, and 41, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0028004 by Miura et al. ("Miura") in view of U.S. Patent 5,177,802 by Fujimoto et al. ("Fujimoto").

Regarding claims 24, 30, 35, and 41, Miura does not disclose a switch that activates the processing unit, as claimed.

Fujimoto discloses a finger imaging system that captures images of a finger in order to identify an individual, similar to the system of Miura. In particular, Fujimoto discloses an embodiment wherein a switch is depressed in order to activate personal identification (see figure 18). As shown in figure 18, when the fingertip depresses the switch 1003, the finger is in a position conducive to imaging the salient portions thereof.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Miura by Fujimoto to include a fingertip-activated switch that initiates personal identification when depressed since Fujimoto teaches that providing a switch for activation as claimed was a conventional technique utilized for the purposes of imaging a finger in a desirable orientation with "little positional slippage" (see column 17, lines 35-41).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general

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nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CML
Group Art Unit 2627
8 November 2005


JINGGE WU
PRIMARY EXAMINER